Hour Meter Wiring Harness Replacement (Continued)

Step 2 Installing the Hour Meter Wire Harness

a. Align the hour meter wiring harness female connectors with the receptacles on the hour meter and gently push the connectors onto the posts (red on "+" and black on "-").

b. Insert the hour meter wiring harness female connector into the J6 receptacle on the controller PCB and gently press until completely seated.

7.4.17 Hour Meter Replacement

Replacement Part Number 3600-024

Included in Kit:	Tools Required:
Hour meter	Phillips screwdriver (medium) Phillips screwdriver – flexible (medium) Phillips screwdriver (small) 5/16" wrench or socket

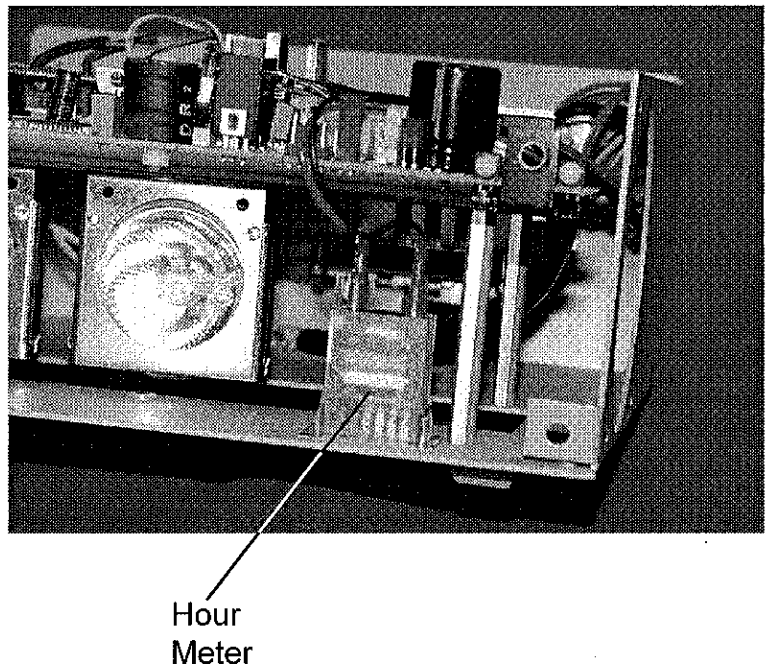
WARNING: Electrical shock hazard: Disconnect the electrical supply before attempting to make any repairs to the device.

CAUTION: Electronic components used in this device are subject to damage from static electricity. Repairs made to this device must be performed only in an antistatic, ESD-protected environment.

Procedure

Removed / Installed During Process:

- Light access door (See Section 5.4, Steps 2-4 for more detailed instructions.)
- Outer cover assembly (See Section 7.4.7 for more detailed instructions.)
- Circulation fan w/ wiring harness (See Section 7.4.12 for more detailed instructions.)
- Power supply assembly (See Section 7.4.13 for more detailed instructions.)
- Front panel assembly partial (See Section 7.4.14 for more detailed instructions.)
- Hour meter wiring harness (See Section 7.4.16 for more detailed instructions.)
- Hour meter



Hour Meter Replacement (Continued)

Step 1 Removing the Hour Meter

a. Carefully tilt the unit up to expose the bottom of the main chassis.

b. Depress the locking tabs on the sides of the hour meter and gently push the hour meter out through the bottom of the main chassis.

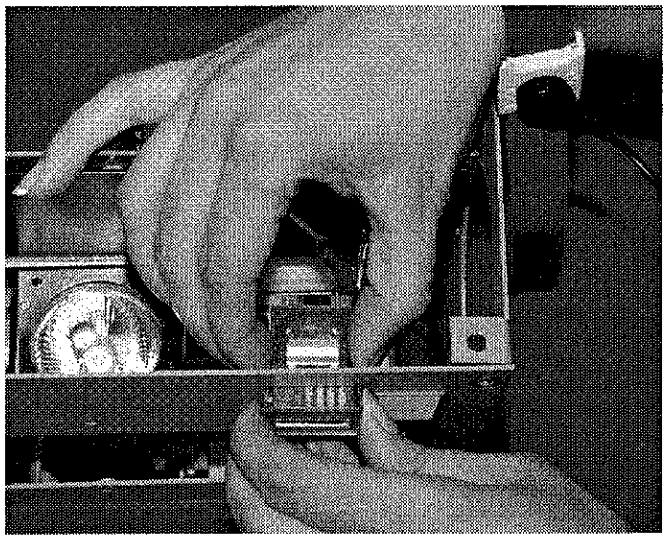


Figure 7-33
Removing the Hour Meter

Step 2 Installing the Hour Meter

a. With the unit still tilted upwards on a protected work surface, align the hour meter with the cut-out in the bottom of the main chassis and place the hour meter into the cut-out. The hour meter should be oriented with the "h" mark towards the back of the unit.

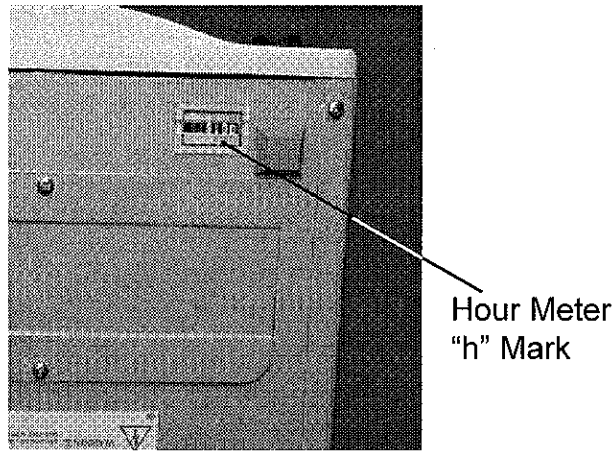


Figure 7-34
Correct Orientation of the Hour Meter

b. Gently press the face of the hour meter into the cut-out in the main chassis until it "snaps" into place.

7.4.18 Optical Filter Assembly Replacement

Replacement Part Number 3600-009

Included in Kit:	Tools Required:
Optical filter Light filter bracket	Phillips screwdriver (medium) Phillips screwdriver – flexible (medium) Phillips screwdriver (small) Diagonals 5/16" wrench or socket Isopropyl alcohol Cleaning cloth
Available in Fastener Kit:	
4-40 × .250" Phillips screw (×2)	

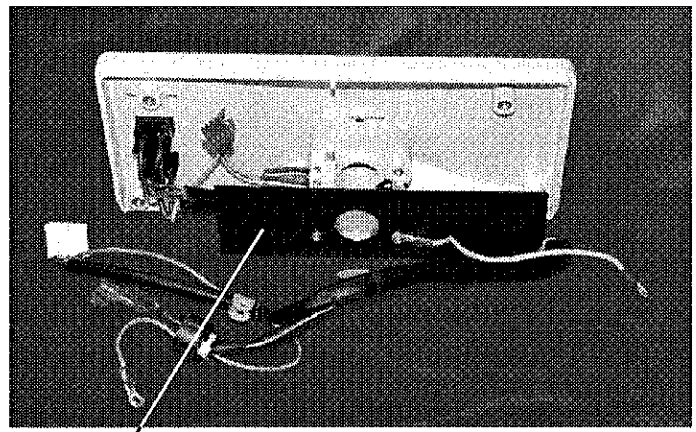
Procedure

Removed / Installed During Process:

- Light access door (See Section 5.4, Steps 2-4 for more detailed instructions.)
- Outer cover assembly (See Section 7.4.7 for more detailed instructions.)
- Circulation fan w/ wiring harness (See Section 7.4.12 for more detailed instructions.)
- Power supply assembly (See Section 7.4.13 for more detailed instructions.)
- Front panel assembly partial (See Section 7.4.14 for more detailed instructions.)
- Optical filter assembly

WARNING: Electrical shock hazard: Disconnect the electrical supply before attempting to make any repairs to the device.

CAUTION: Electronic components used in this device are subject to damage from static electricity. Repairs made to this device must be performed only in an antistatic, ESD-protected environment.



Optical Filter Assembly Replacement (Continued)

Step 1 Removing the Optical Filter Assembly

a. Using a small Phillips screwdriver, remove the screw securing the ground wire and the optical filter assembly to the standoff on the fiber bundle connector assembly.

b. Remove the remaining screw on the optical filter assembly.

c. Remove the optical filter assembly from the unit.

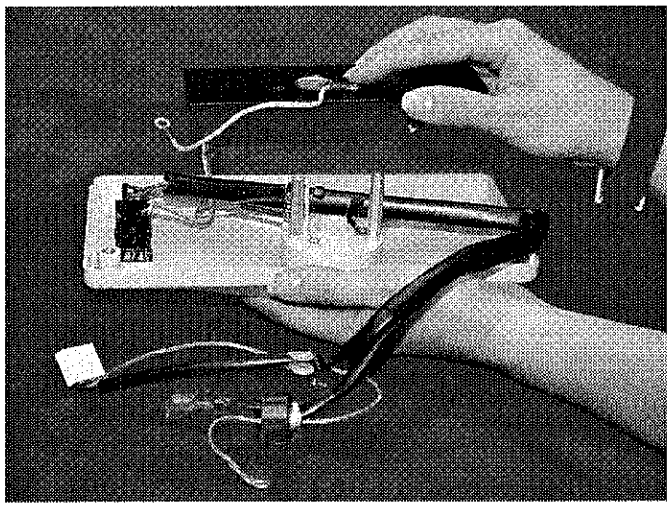


Figure 7-35
Optical filter Assembly Removal

Step 2 Installing the Optical Filter Assembly

a. Align the optical filter assembly with the standoffs on the fiber bundle connector assembly. Note that, when looking at the inside of the front panel assembly, the optical filter should be towards the fiber bundle connector and the cut-off corner of the light level filter bracket should be on the right.

b. Install and tighten the Phillips screw that secures the ground wire and the optical filter assembly to the standoff on the fiber bundle connector assembly.

c. Tighten the remaining screw on the optical filter assembly.

7.4.19 AC Power Wiring Harness Replacement

Replacement Part Number 3600-017

Included in Kit:	Tools Required:
AC power wiring harness AC power switch Ferrite shield	Phillips screwdriver (medium) Phillips screwdriver – flexible (medium) Phillips screwdriver (small) Diagonals 5/16" wrench or socket
Available in Fastener Kit:	
Cable tie (×2)	

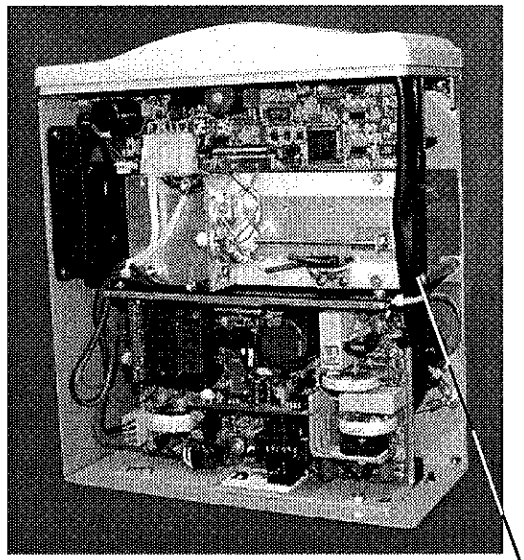
Procedure

Removed / Installed During Process:

- Light access door (See Section 5.4, Steps 2-4 for more detailed instructions.)
- Outer cover assembly (See Section 7.4.7 for more detailed instructions.)
- Circulation fan w/ wiring harness (See Section 7.4.12 for more detailed instructions.)
- Power supply assembly (See Section 7.4.13 for more detailed instructions.)
- Front panel assembly (See Section 7.4.14 for more detailed instructions.)
- AC power wiring harness

WARNING: Electrical shock hazard: Disconnect the electrical supply before attempting to make any repairs to the device.

CAUTION: Electronic components used in this device are subject to damage from static electricity. Repairs made to this device must be performed only in an antistatic, ESD-protected environment.



AC Power Wiring Harness Replacement (Continued)

Step 1 Removing the AC Power Wiring Harness

a. Depress the locking tabs on the sides of the AC power switch and gently push the AC power wiring harness out through the front panel.

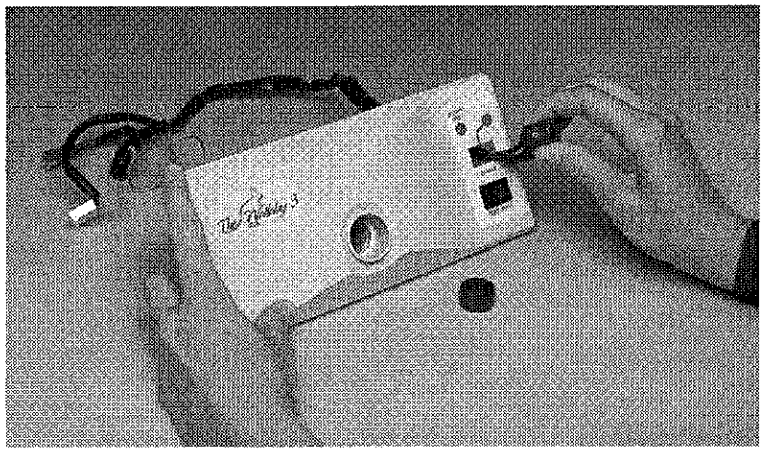


Figure 7-36
AC Power Wiring Harness Removal

b. Cut tie wrap securing ferrite to wire harness and remove ferrite.

c. Continue feeding the wiring harness through the AC power switch cut-out until completely free of the front panel assembly.

Step 2 Installing the AC Power Wiring Harness

a. Align the AC power wiring harness with the cut-out in the front panel assembly and feed the wiring harness through the opening.

b. Align the AC power switch with the cut-out in the front panel and gently press in the switch until it "snaps" into place. Note that the power switch must be oriented with the "O" towards the middle of the unit.

c. Wrap the 1/4" sleeve once through the ferrite. Then, wrap the green / yellow ground wire twice through the same ferrite. Secure both with a cable tie.

7.4.20 Light Level / Panel Input Wiring Harness Replacement

Replacement Part Number 3600-019

Included in Kit:	Tools Required:
Light level / panel input wiring harness Light level switch Fiber bundle micro switch	Phillips screwdriver (medium) Phillips screwdriver – flexible (medium) Phillips screwdriver (small) Needle nose pliers 5/16" wrench or socket
Available in Fastener Kit: 2-56 × .500" Phillips screw (×2) 2-56 nut (×2)	

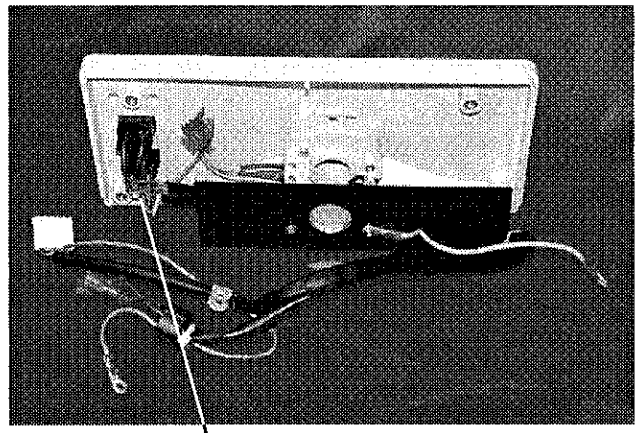
Procedure

Removed / Installed During Process:

- Light access door (See Section 5.4, Steps 2-4 for more detailed instructions.)
- Outer cover assembly (See Section 7.4.7 for more detailed instructions.)
- Circulation fan w/ wiring harness (See Section 7.4.12 for more detailed instructions.)
- Power supply assembly (See Section 7.4.13 for more detailed instructions.)
- Front panel assembly partial (See Section 7.4.14 for more detailed instructions.)
- Optical filter assembly (See Section 7.4.18 for more detailed instructions.)
- Light level / panel input wiring harness

WARNING: Electrical shock hazard: Disconnect the electrical supply before attempting to make any repairs to the device.

CAUTION: Electronic components used in this device are subject to damage from static electricity. Repairs made to this device must be performed only in an antistatic, ESD-protected environment.



Light Level / Panel Input Wiring Harness

Light Level / Panel Input Wiring Harness (Continued)

Step 1 Removing the Light Level / Panel Input Wiring Harness

a. Using a small Phillips screwdriver and 5/16" wrench or socket, remove the two screws and nuts that secure the fiber bundle micro switch to the fiber bundle connector subassembly.

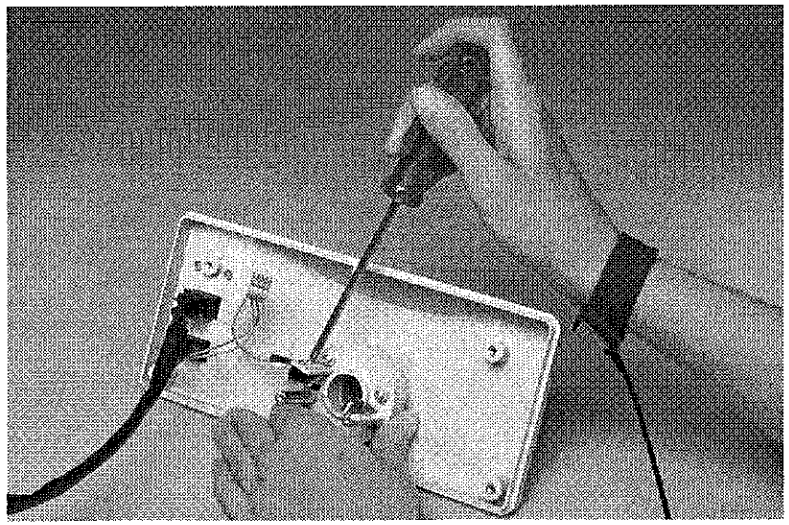


Figure 7-37
Removing the Fiber Bundle Micro Switch Screws

b. Depress the locking tabs on the sides of the light level switch and gently push the light level switch w/ fiber bundle micro switch and wiring harness out through the front panel.

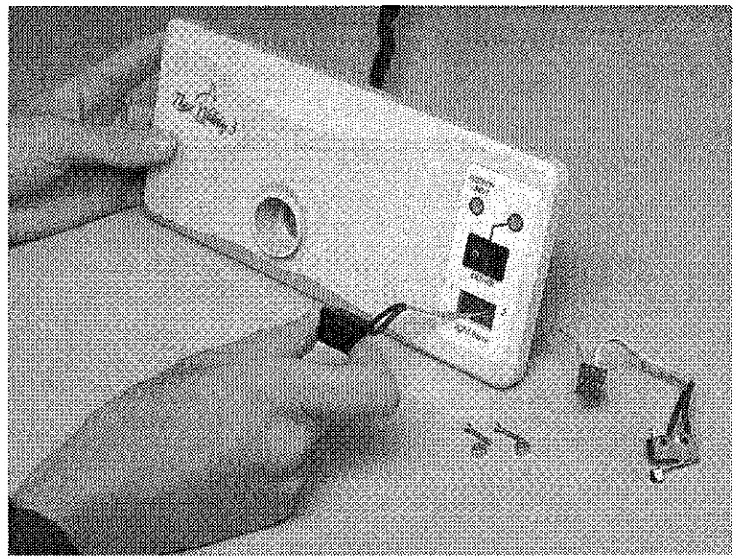


Figure 7-38
Light Level / Panel Input Wiring Harness Removal

c. Continue feeding the wiring harness through the light level switch cut-out until completely free of the front panel assembly.

Light Level / Panel Input Wiring Harness (Continued)

Step 2 Installing the Light Level / Panel Input Wiring Harness

a. Align the light level / panel input wiring harness with the cut-out in the front panel and feed the fiber bundle micro switch and wiring harness through the opening.

b. Align the light level switch with the cut-out in the front panel and gently press in the switch until it "snaps" into place.

NOTE: The light level switch MUST BE inserted into the front panel so the two soldered wires on the back of the switch are oriented towards the middle of the front panel.

c. Align the fiber bundle micro switch with the fiber bundle connector subassembly. Using a small Phillips screwdriver and 5/16" wrench or socket, secure the micro switch to the fiber bundle connector subassembly.

7.4.21 Fiber Bundle Connector Subassembly Replacement

Replacement Part Number 3600-005

Included in Kit:	Tools Required:
Fiber bundle connector, outer Fiber bundle connector, inner Gasket, grounding spring 1.250" Standoff (×2) Ball plunger latch screw	Phillips screwdriver (medium) Phillips screwdriver - flexible (medium) Phillips screwdriver (small) Needle nose pliers 5/16" wrench or socket
Available in Fastener Kit:	
4-40 × .625" Phillips screw (×3)	

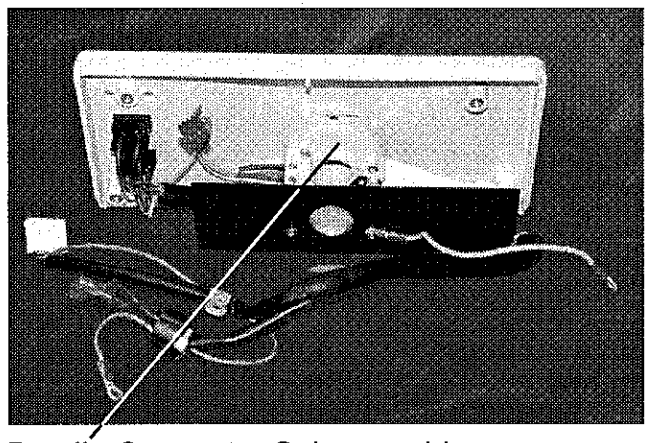
Procedure

Removed / Installed During Process:

- Light access door (See Section 5.4, Steps 2-4 for more detailed instructions.)
- Outer cover assembly (See Section 7.4.7 for more detailed instructions.)
- Circulation fan w/ wiring harness (See Section 7.4.12 for more detailed instructions.)
- Power supply assembly (See Section 7.4.13 for more detailed instructions.)
- Front panel assembly partial (See Section 7.4.14 for more detailed instructions.)
- Optical filter assembly (See Section 7.4.18 for more detailed instructions.)
- Light level / panel input wiring harness w/ light level switch and fiber bundle micro switch - partial (See Section 7.4.20 for more detailed instructions.)
- Fiber Bundle Connector Subassembly

WARNING: Electrical shock hazard: Disconnect the electrical supply before attempting to make any repairs to the device.

CAUTION: Electronic components used in this device are subject to damage from static electricity. Repairs made to this device must be performed only in an antistatic, ESD-protected environment.



Fiber Bundle Connector Subassembly

Fiber Bundle Connector Subassembly (Continued)

Step 1 Removing the Fiber Bundle Connector Subassembly

a. Using a small Phillips screwdriver, remove the three Phillips screws that secure the fiber bundle connector subassembly to the front panel.

b. Pull the fiber bundle connector subassembly straight off the front panel.

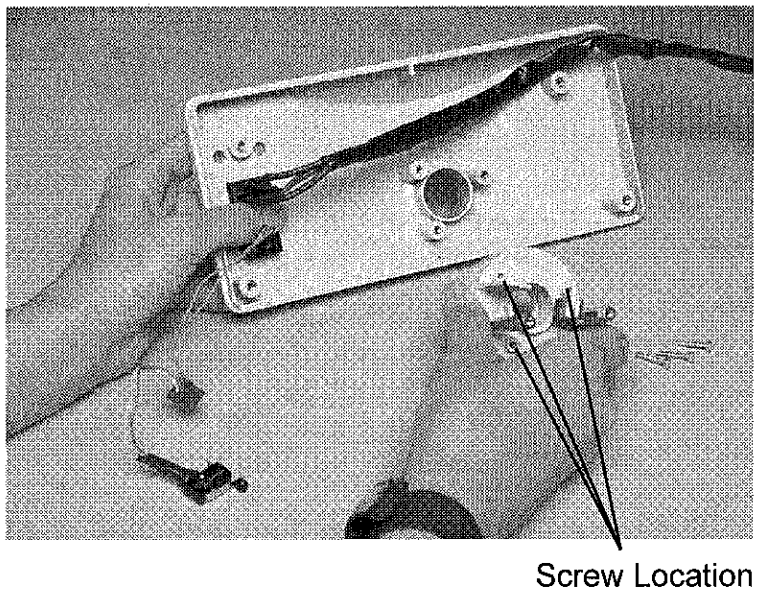


Figure 7-39
Fiber Bundle Connector Subassembly Removal

Step 2 Installing the Fiber Bundle Connector Subassembly

a. Align the fiber bundle connector subassembly with the front panel and set into place.

b. Install and tighten the three Phillips screws that secure the fiber bundle connector subassembly to the front panel.

7.4.22 Front Panel Replacement

Replacement Part Number (U. S. and Canada) 3600-006

Replacement Part Number (International) 3600-038

Included in Kit:	Tools Required:
Front panel User interface overlay label Wallaby logo overlay label	Phillips screwdriver (medium) Phillips screwdriver – flexible (medium) Phillips screwdriver (small) Diagonals 5/16" wrench or socket
Available in Fastener Kit: 10-32 × .250" Phillips Sems screw (×4)	

Procedure

Removed / Installed During Process:

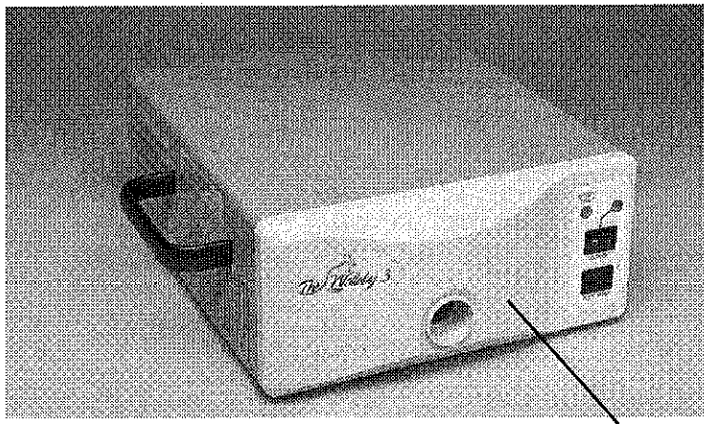
- Light access door (See Section 5.4, Steps 2-4 for more detailed instructions.)
- Outer cover assembly (See Section 7.4.7 for more detailed instructions.)
- Circulation fan w/ wiring harness (See Section 7.4.12 for more detailed instructions.)
- Power supply assembly (See Section 7.4.13 for more detailed instructions.)
- Front panel assembly (See Section 7.4.14 for more detailed instructions.)
- Optical filter assembly (See Section 7.4.18 for more detailed instructions.)
- AC power switch w/ wiring harness (See Section 7.4.19 for more detailed instructions.)
- Light level / input panel wiring harness w/ light level switch and fiber bundle micro switch (See Section 7.4.20 for more detailed instructions.)
- Fiber bundle connector subassembly (See Section 7.4.21 for more detailed instructions.)
- Front panel

WARNING: Electrical shock hazard: Disconnect the electrical supply before attempting to make any repairs to the device.

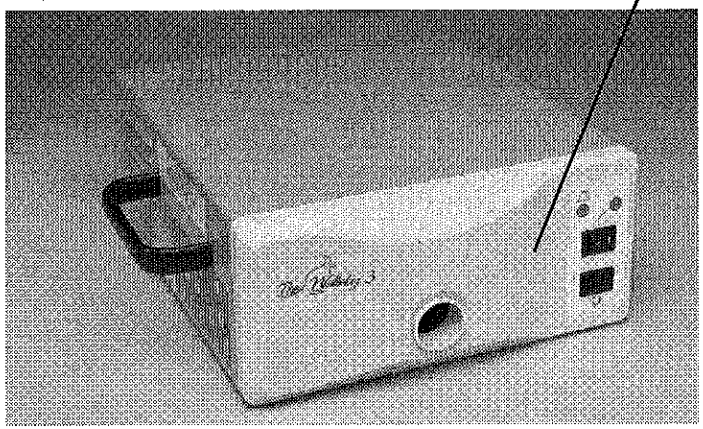
CAUTION: Electronic components used in this device are subject to damage from static electricity. Repairs made to this device must be performed only in an antistatic, ESD-protected environment.

Front Panel Replacement (Continued)

U.S. and Canada



International



Step 1 Removing the Front Panel

a. All components have now been removed and the front panel is free from the unit.

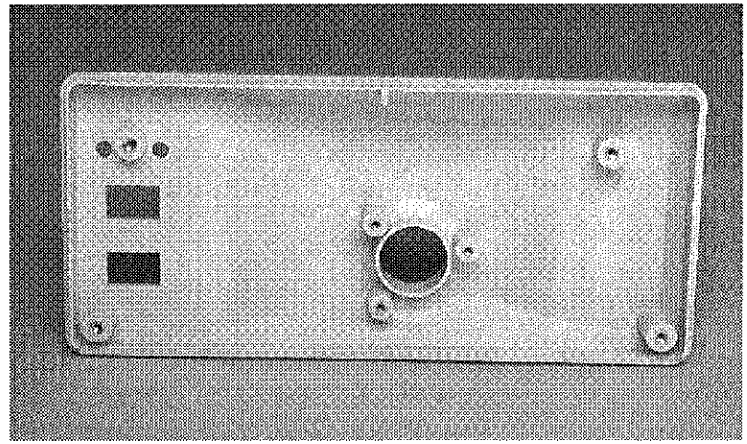


Figure 7-40
The Front Panel

Step 2 Installing the Front Panel

a. Follow the removal process in reverse order to install the front panel.

7.4.23 Linear Stepper Motor Actuator Replacement

Replacement Part Number 3600-012

Included in Kit:	Tools Required:
Linear stepper motor actuator Cable clamp	Phillips screwdriver (medium) 1/4" wrench or socket
Available in Fastener Kit:	
6-32 × .250" Phillips sems screw (×2) 4-40 nut	

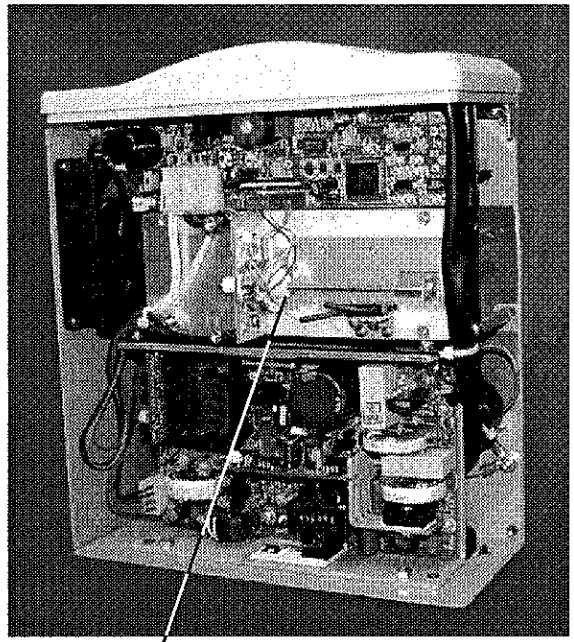
Procedure

Removed / Installed During Process:

- Light access door (See Section 5.4, Steps 2-4 for more detailed instructions.)
- Outer cover assembly (See Section 7.4.7 for more detailed instructions.)
- Linear stepper motor actuator

WARNING: Electrical shock hazard: Disconnect the electrical supply before attempting to make any repairs to the device.

CAUTION: Electronic components used in this device are subject to damage from static electricity. Repairs made to this device must be performed only in an antistatic, ESD-protected environment.



Linear Stepper Motor Actuator

Linear Stepper Motor Actuator Replacement (Continued)

Step 1 Removing the Linear Stepper Motor Actuator

a. Remove the linear stepper motor actuator wiring harness female connector from the J2 receptacle on the controller printed circuit board (PCB).

b. Free the 24 volt wiring harness from the two standoffs and the stepper motor tail piece. (See Section 7.4.11 for more detailed instructions.)

c. While carefully holding the worm gear nose piece, use a 1/4" wrench or socket to remove the nut that secures the linear stepper motor actuator to the linear slide bracket. You will have to break the Loc-Tite® seal to remove the nut.

d. Using a Phillips screwdriver, remove the two screws that secure the linear stepper motor actuator to the actuator bracket.

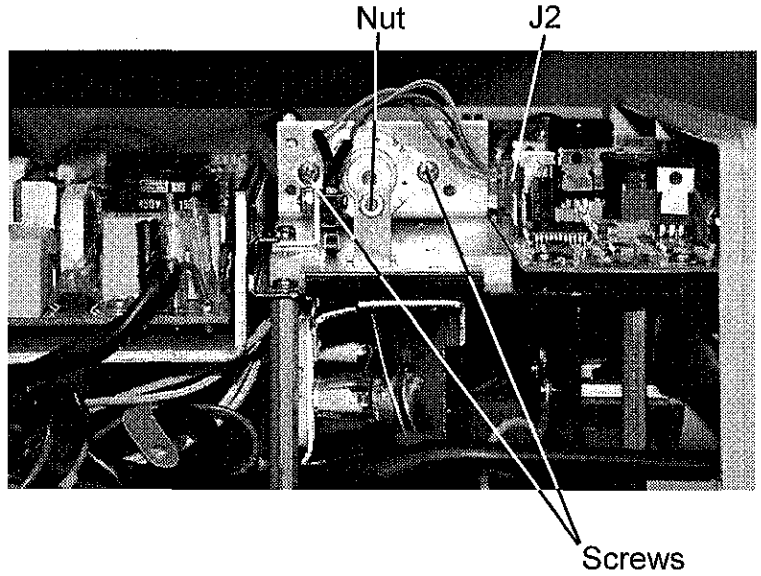


Figure 7-41
J2 Location, Screws, and Nut Location

e. Lift the linear stepper motor actuator away from the unit.

Linear Stepper Motor Actuator Replacement (Continued)

Step 2 Installing the Linear Stepper Motor Actuator

a. Align the linear stepper motor actuator with the actuator bracket.

b. Install and tighten the two Phillips screws that secure the linear stepper motor actuator to the actuator bracket.

c. Apply Loc-Tite® 222 and, while carefully holding the worm gear nose piece in place, install and tighten the nut that secures the linear stepper motor actuator to the linear slide bracket.

d. Route the 24 volt wiring harness between the two standoffs and the actuator bracket, then under the stepper motor tail piece.

e. Insert the linear stepper motor actuator wiring harness female connector into the J2 receptacle on the controller PCB and gently press until completely seated.

7.4.24 Actuator Bracket Replacement

Replacement Part Number 3600-042

Included in Kit:	Tools Required:
Actuator bracket	Phillips screwdriver (medium) Diagonals 1/4" wrench socket
Available in Fastener Kit: 6-32 × .250" Phillips Sems screw (×4)	

Procedure

Removed / Installed During Process:

- Light access door (See Section 5.4, Steps 2-4 for more detailed instructions.)
- Outer cover enclosure assembly (See Section 7.4.7 for more detailed instructions.)
- Linear stepper motor actuator (See Section 7.4.23 for more detailed instructions.)
- Actuator bracket

WARNING: Electrical shock hazard: Disconnect the electrical supply before attempting to make any repairs to the device.

CAUTION: Electronic components used in this device are subject to damage from static electricity. Repairs made to this device must be performed only in an antistatic, ESD-protected environment.

Actuator Bracket Replacement (Continued)

Step 1 Removing the Actuator Bracket

a. Remove the nut and cable clamp that secures the lamp holder wiring harnesses to the stud on the actuator bracket.

b. Using a 1/4" wrench or socket, remove the two standoffs that secure the actuator bracket to the linear slide bracket.

c. Using a medium Phillips screwdriver, remove the Phillips screw that secures the actuator bracket to the slide rails.

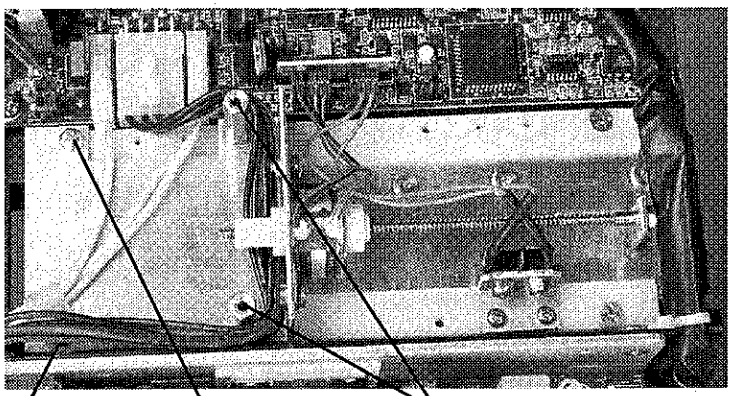


Figure 7-42
Nut, Standoff, Cable Clamp, and Screw Locations

d. Lift the actuator bracket away from the unit.

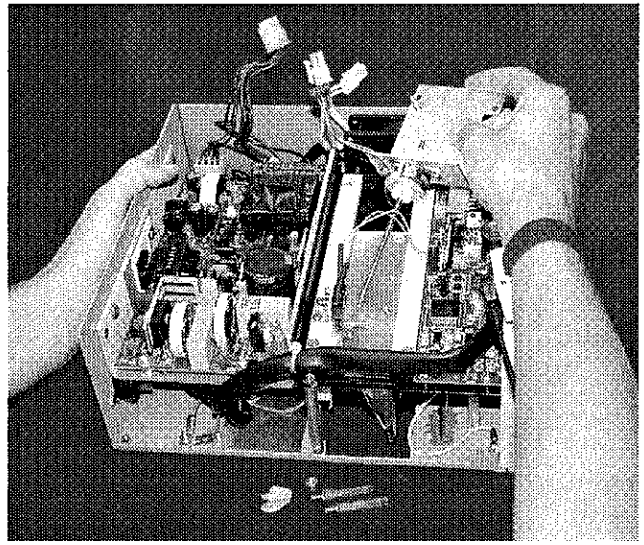


Figure 7-43
Removing the Linear Stepper Motor Actuator Assembly

Actuator Bracket Replacement (Continued)

Step 2 Installing the Actuator Bracket

a. Align the actuator bracket with the slide rails and the linear slide bracket.

b. Install and tighten the Phillips screw that secures the actuator bracket to the slide rails.

c. Install and tighten the two standoffs that secure the actuator bracket to the linear slide bracket.

d. Use the cable clamp and nut to secure the lamp holder wiring harnesses to the actuator bracket stud.

7.4.25 Controller Printed Circuit Board (PCB) Replacement

Replacement Part Number 3600-004

Included in Kit:	Tools Required:
Controller PCB	Phillips screwdriver (medium)
Available in Fastener Kit: 6-32 × .250" Phillips Sems screw (×4)	

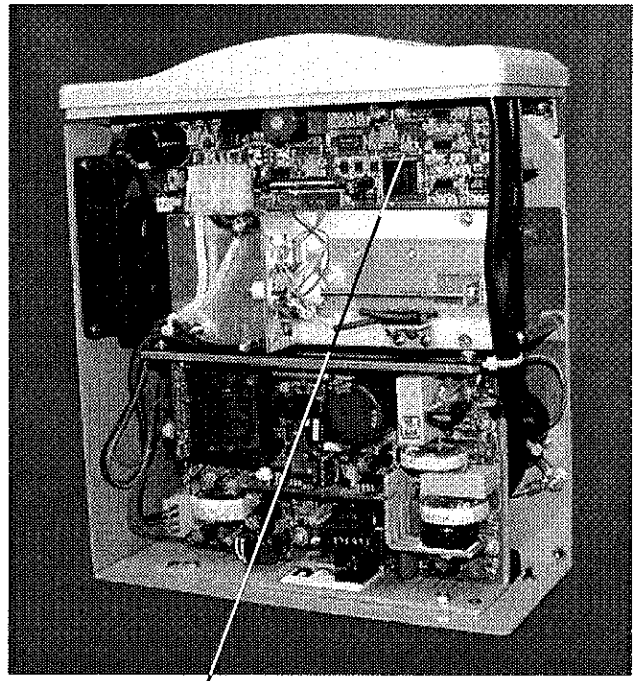
Procedure

Removed / Installed During Process:

- Light access door (See Section 5.4, Steps 2-4 for more detailed instructions.)
- Outer cover assembly (See Section 7.4.7 for more detailed instructions.)
- Controller PCB

WARNING: Electrical shock hazard: Disconnect the electrical supply before attempting to make any repairs to the device.

CAUTION: Electronic components used in this device are subject to damage from static electricity. Repairs made to this device must be performed only in an antistatic, ESD-protected environment.



Controller Printed Circuit Board (PCB) Replacement (Continued)

Step 1 Removing the Controller PCB

a. Remove the light level switch / input panel wiring harness w/ light level switch and fiber bundle micro switch female connector from the J5 receptacle on the controller PCB.

b. Remove the hour meter wiring harness female connector from the J6 receptacle on the controller PCB.

c. Remove the linear slide micro switch wiring harness female connector from the J9 receptacle on the controller PCB.

d. Remove the linear stepper motor actuator wiring harness female connector from the J2 receptacle on the controller PCB.

e. Remove the circulation fan wiring harness female connector from the J13 receptacle on the controller PCB.

NOTE: Locate the lamp holder wiring harness connectors and mark them as lamp "A" and "B".

f. Depress the locking tabs on the lamp holder wiring harnesses male connectors and remove the connectors from the lamp "A" and lamp "B" receptacles on the controller PCB.

g. Depress the locking tab on the 24 volt wiring harness male connector and remove the connector from the J1 input power receptacle on the controller PCB. Note that it may be necessary to free the 24 volt wiring harness from the two standoffs securing the linear stepper motor actuator bracket assembly.

h. Using a medium Phillips screwdriver, remove the four Phillips Sems screws that secure the controller PCB to the linear slide inner chassis.

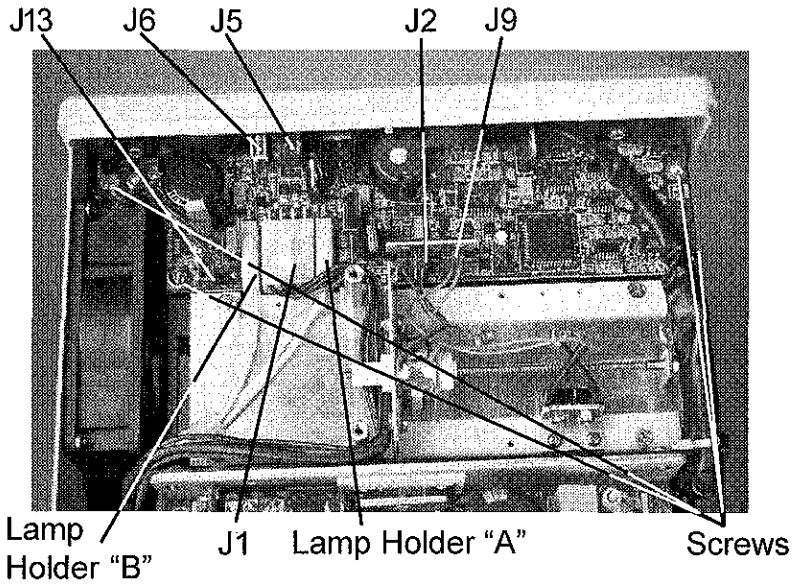


Figure 7-44
Controller PCB Connections, Screw Locations